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ABSTRACT

The paper reviews literature and research on the educability of Down's syndrome children, and considers programs for Down's syndrome children around the world. Characteristics of Down's syndrome and early intervention techniques are also discussed. (SBH)

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EDUCATIONAL ACHIEVEMENTS OF DOWN'S SYNDROME CHILDREN

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EDUCATIONAL ACHIEVEMENTS OF DOWN'S SYNDROME CHILDREN

Let us begin with an article from a contemporary and secular news magazine, U.S. News and World Report, August 1, 1977. The article is, "Help for People Society Often Ignores". There is a picture there of Hazel Hagarty and her daughter, Kathy, who has Down's syndrome. It reports that Hazel was told Kathy would never read or write and trying to educate her would only lead to frustration. That was 18 years ago and today Kathy is librarian at the St. Coletta School for Mentally Retarded Children which Mrs. Hagarty started with her husband 11 years ago when Kathy was seven. The mother continued by saying, "I always felt these children had more potential than they were given credit for. More than that, I thought they had the right to learn, and not automatically be destined to ignorance in an institution." In The Horizons of Health, published by the Harvard University Press, Cambridge, Massachusetts, in 1977, there is a chapter by Hugo Moser, M.D. stating, "The implementation of modern child-rearing and training techniques with emphasis on normalization and home-based care, has demonstrated that many children with Down's anomaly are people with significant growth in learning and that they can achieve reasonably full lives and be sources of pleasure and joy to their families."

Then an example from a family struggling with this problem today. They are the Gowdey's from Seattle, Washington, who have a fourteen-year-old Down syndrome daughter. She is an attractive congenial girl who is in her second year of special education classes in middle school which, in America, implies junior high school. She is doing work at nearly her age level in reading and in other subjects, but is behind in math. Mr.

Gowdey comments on the possibility that the child may become involved in learning experiences by vicarious means. These may be by watching others do things, by being read to, by being told how to do a thing, by watching the actors on television or other pictorial means. And there are others as you and I know.

In that vein Throne goes on to comment in "Increasing Intelligence through Training; a Future Role for School and Residential Facilities for the Mentally Retarded?" This has to do with a study by Skeels and Dye (1939) wherein they reported two retarded infants, ages 13 and 16 months, had, six months after being transferred from a state orphanage to a state institution for the retarded registered remarkable gain. The younger infant's I.Q. had shot up from 46 to 77, the older infant from 35 to 87. It turned out that the infants had been virtually adopted by adult female residents of the institution, ages 18 to 50, who, of course, were retarded themselves. The article continues to develop the educational methods of teaching through training to differentiate between the traditional goal of merely training the retarded up to their retarded potentialities but rather takes the tack that they might be training them to be less retarded as the goal. This presentation of Throne's was in the Mental Retardation Magazine in December 1977.

This is solidified with the report from Mr. Sletved and the Social-styrelsen Organization in Copenhagen, Denmark. He says, "One piece of research comparing ordinary school children's social abilities with special school children based on Herbert Goldstein's social learning curriculum indicates that there were many children with Down syndrome but none of them differed in any significant way from the other children

who were diagnosed mentally retarded." He mentions in his letter that from Milano, Italy some years ago there was a school for wealthy parents of Down syndrome children which in a very scholastic way showed Mongoloid children could learn as much as other children when presented with a proper educational program.

Thus we have indications from several different origins that Down syndrome children have potential for learning more than they had 20 years ago. But is there any hint in the foregoing as to the reason for the increased activity providing educational opportunities for Down syndrome children?

I have a gut feeling that in the article by John Throne wherein he comments on the research done long ago with those two infant Down syndrome babies being cared for by adult retarded women at an institution that there the seed for the idea for early infant stimulation was probably planted.

As early as 1967 Mr. E. Brinkworth in Royal Society of Health Journal, April, noted that the degree of mental handicap in Down syndrome can be significantly influenced by post-natal compensating treatment and training. We have further indication of this particularly since 1971 when the now famous program began at the University of Washington under the leadership of Dr. Alice H. Hayden and Dr. Norris G. Haring. The University Park Press of Maryland in 1974 carried some of the first articles of their work in the series "Research Practice in Mental Retardation." Then last year the same publishing house included a paper "Intervention Strategies for Risk Infants and Young Children." Dr. Hayden as director of the Model Preschool for Handicapped Children has seen amazing things

happen with Down syndrome infants after they had begun the program. She has been quoted when questioned about reading that no limit has been found yet for these infants as to their top reading potential. The University of Washington program again in Seattle aimed to develop and use sequential programs to increase these children's rate of developing motor, communication, social, cognitive, and self-help skills; to involve parents in all phases of their children's development; to provide practical training for students, professionals, and para-professionals; and to facilitate replication and outreach. Twenty infants are in the infant learning class, 11 children in the early preschool, 18 in advanced preschool, and 11 in the kindergarten class. In all classes, the major objective is to make children's development more nearly approximate sequential development of normal children. A primary class is being planned for children who are approaching six years of age and who have the requisite skills to begin more advanced academic work. Establishment of integrated classes also is being considered. More research on this aspect of developmental training is needed.

HOW DO THEY VARY IN ABILITY

Professor John Rynders, University of Minnesota, commented, "on a psychometric basis there is less varibility between Down syndrome retardation and other types of retardation." He goes on to say that, "Shapiro thinks in his studies that there is a 30% varibility range. He feels that may be due to the extra chromosome material." In the book The I.Q. Controversy by Block and Dworkin, writers who have provided intensive tutoring for Down syndrome infants, there is the following quotation: "At the age of two, these children have average I.Q.'s of

85 while control-group children, who are enrolled in a variety of other programs, average 68." If such findings are supported by other researchers, it is logical to question the propriety of determining what is the least restrictive educational alternative based solely on I.Q. In an article by Haring, Hayden, and Beck entitled "General Principles and Guidelines in 'Programming' for Severely Handicapped Children and Young Adults" printed in Focus on Expectional Children, April, 1976 which is published by Love Publishing Company in Denver, Colorado, they conclude: "We believe, therefore, that no matter how severe the damage to an infant or child -- damage that interferes with learning -- there is still a program that parents can be trained to manage, with ongoing assistance from all of the resources mentioned earlier in this paper." There is carry over from the classroom session with the parents into the home also. The longer children stay in the program, the greater the progress they demonstrate toward developmental norms. (Test instruments used included the Peabody Picture Vocabulary Test, the Denver Developmental Screening Test, Uniform Performance Assessment System, and an inventory developed by the staff and tested in field settings.)

In this well known "Project Edge" reported in the book, To Give An Edge, 1974, out of a total of 35 subjects, 20 registered an I.Q. score of 52 and above which by today's classification places them in the mildly retarded range. All of these 35 children had the trisomic form of Down syndrome, all are living at home, and all were over five years of age at the time of testing.

Rynders along with Spiker and Horrobin in another paper entitled "100 Years of Low Developmental Expectations for Down Syndrome Perons" which was presented at the AAMD Convention in Chicago in 1976, states

49 subjects out of a total of 103 registered in the mildly retarded range and above. These children were also over the age of five but included trisomic, translocation, mosaic types of DS. This represented only 1%, however, of all those in this particular study.

From the program at the University of Oregon as reported in the book, Teaching a Down Syndrome Infant: A Guide for Parents by Marci J. Hanson published by the University of Oregon in 1977 we find that parents were very effective in teaching their babies skills. It is significant in this book to realize that all infant teaching was performed by the parents in their homes. It goes on to state in listing the various behavioral milestones such as "sitting supported with the head steady" or "rolls over" or "transfers objects hand to hand" or "feeds self with fingers", it was indicated that children in this project did the behavior at ages not only earlier than children not involved in the program, but close to normal developmental ages."

Down Syndrome Studies-VAR

"Perceptual and gross - motor ability," Giger, W. Central Michigan University, 1975. Idealogical classification as Down syndrome reveals significant differences in ability to achieve motor tasks with competence such as the target hop, obstacle course, agility run, and 20 yard dash.

"The Relationship between Affective and Cognitive Development in DS Infants." Cicchetti, D. and Sorufe L. Resource in Education (ERIC), 1976. Relationships between affective and cognitive development in 14 Down syndrome infants revealed that such infants followed the order of laughter items as expected for normal children but the on-set of laughter and smiling was significantly later than that of normals.

Testing was done at 16 months on the Bayley scales and Infant Behavior Record.

Normalization -- "Marc". Frank, J. in Mental Retardation, 1975. A 19-year-old DS wrote a very fine letter to a friend in Israel indicating independence, social skills and cognitive skills. These were attributed to his parent's treatment, expectations, and the belief in normalization.

"Mental Development" in: Smith and Berg's Down's Anomaly, 1976. The most crucial disabilities are those within mental development. Lack of development of the brain stem and cerebellum has been commented upon by many. Nervous system involvement indicates deficiencies in MR, muscular hypotonia, incoordination, and reduced sensory responses. There is evidence that environmental factors such as good care at home and training can improve the rate of development in DS.

"DS Children's Early Comprehension of WH Questions, Asked in Naturalistic and Experimental Settings," by Hesse, K. University of Minnesota Research Report #87, 1975. A comprehension of what, where, and why questions posed by the mothers in an experimental situation to two to five-year-old Down children. Form, content, and appropriateness of their response was evaluated from tape recordings of mother/child situations and from video tapes of individual sessions with the experimentor. Analysis indicates that subjects' comprehension of this type of question parallels the first stage of interrogative comprehension in normal children. Implications of data for teachers' questioning techniques are discussed, and photographs used with the experimental set of questions are described.

"Educational Intervention Strategies for High Risk Infants and Young Children." In Tjossem, T. D., (Ed.), Baltimore, University Park Press, 1976, Dr. Wiegerink comments, "The community development committee, one of six committees formed to review and assess the implications of the conference "Early Intervention with High Risk Infants and Young Children" at the University of North Carolina 1974 for the development of early intervention strategies, recommends the development of effective service delivery systems designed specifically to maintain high quality services for much larger populations of high risk children and their families, with emphasis placed on the delivery of quality services to families living in rural and urban poor areas.

AROUND THE WORLD

Singapore

Six hundred moderately retarded children and young persons and youths are attending our five training centers and three sheltered workshops. Of these not less than 200 will be Down syndrome. We have not done any project using special techniques to develop or improve their skills, but they all go to the same training program until the age of 16.

Ireland

Down syndrome children who are in the moderate/severe category are placed in schools accordingly. Parents of preschool children who have stimulated their child from the beginning are aware of their academic achievements and would like to see them get the necessary recognition. One such child who is now eight has just completed three years at a Montessori school for normal children. His social adjustment is normal and he has been assessed for three years as being in the mild category.

South Africa

This respondent who is the mother of a Down's daughter and also the principal of a new school for retarded children writes that there is "little literature in this country particularly pertaining to Down's children. The professional care of the retarded is still in its infancy in this country with very little research being done in this specialized field. Our training program here approved by the education department is used as a base for training all types of retarded youngsters." One reference mentioned is Down Syndrome, University of Potchef Stroom, Ferdinand Postam Library, Potchef Stroom 2520, South Africa.

United States

An anecdotal statement by Marshall R. Nelson, presenter. We had an unusual event in the past year which occurred in the Boy Scout troop my son belongs to. On October 17, 1977 Bryant Frandsen was honored with the Eagle Scout award at Park School, Special School District, St. Louis, Missouri. Nothing unusual in that statement except that Bryant is classified (labeled) a person with Down syndrome.

Also very recently a D.S. man has been named Minister of the Eucharist in the Catholic church, Archdiocese of Baltimore. (NAMR, May 1978)

Australia

In Queensland a research paper has been published in the past by Mr. Andrews and Jeanette G. Andrews, "Studies of the Oral Language of Down Syndrome Children".

In Sidney an intervention has begun there under Dr. Bernie Thorley at MacQuarie University under the replication program from the University of Washington.

In the Northern Territory division of Australia, Department of Education, is a program for 12 Down syndrome children, age range from 18 months to 4 years, who meet each week for a play therapy session with a psychologist and occupational therapist. The results of these group sessions have been very encouraging and the participation of parents an added benefit.

In Australia Capital Territory a control study was begun at Cranleigh School in 1974. Six DS preschool children in social, physical, and pre-academic development measured natural developments ran close to norm. Later in primary school in language programs on Vineland and Portage tests all showed significant gains compared to normal progress.

Canada

Correspondence indicates from the early special stimulation programs in Canada that Down syndrome children are found in services provided for all retarded children and adults. "We do not have much specific information about their progress as distinguished from that of other retarded people. We do know that Down syndrome adults are making good progress in apartment living projects. With regard to Dr. Hayden's work in Seattle, Washington observers from Canada have remarked that Hayden's program is a very important demonstration project and they are hoping that the plan to integrate the children into "normal" schools and observe their progress there will follow soon." This correspondence also included a letter from a mother whose D.S. daughter is attending the neighborhood school in a "normal" classroom.

Portugal

"Here in Portugal the only organization that assists educationally

with Down syndrome children, adolescence and adult is our association. This is the association for Parents of Children with Mental Retardation. We have a consultation in Lisbon that assists 960 Down syndrome persons. From here they are directed to our nursery, nursery school, or our training centers according to their ages. The admission age for the nursery is three months and three years for the nursery school, no admission age for the training centers; and it depends on mental age and development. There are two workshops and 13 training centers in the country. There is little or no research work being done in Portugal."

Direct U.S. correspondence to Down Syndrome Congress, Col. Robert Glasgow, President, 8509 Wagon Wheel Road, Alexandria, Virginia 22309.

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